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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/760,926	01/16/2001	Takao Abe	09792909-4756	4866

26263 7590 01/21/2004

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EXAMINER

CREPEAU, JONATHAN

ART UNIT PAPER NUMBER

1746

DATE MAILED: 01/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/760,926

Applicant(s)

ABE, TAKAO

Examiner

Jonathan S. Crepeau

Art Unit

1746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,2 and 4-13 is/are allowed.
- 6) ☒ Claim(s) 14-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All   b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

1. This Office action addresses claims 1, 2, and 4-18. Claims 1, 2, and 4-13 are allowed. Claims 14-18 remain rejected under 35 USC §103 for the reasons of record. Accordingly, this action is made final.

### ***Claim Rejections - 35 USC § 103***

2. Claims 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taki et al (U.S. Patent 5,418,082) in view of JP 10-284035.

Regarding claim 17, Taki et al. is directed to nonaqueous lithium secondary batteries having spirally-wound electrode laminates (see col. 1, lines 10 and 46). Regarding claim 14, as shown in Figure 6, a safety valve (5) is arranged on one end side of the cylindrical outer packaging can (2) holding the electrode element therein. The safety valve comprises a projecting portion (9) that projects toward the electrode element and is connected to a lead (7) of the element at the center of the safety valve. A disk (23) having a central hole (21) is positioned between the safety valve and the electrode element, and the projecting portion is connected to the lead of the electrode element through the central hole. The disk further comprises a plurality of holes (22) located along a circle centering on a symmetrical point of the central hole.

The reference does not expressly teach that the disk has a linear thin portion formed in a circular shape surrounding the hole (claims 14 and 15). The reference further does not teach that

the battery comprises electrode materials which dope and undope lithium (e.g., that it is a lithium-ion battery) (claims 16 and 18).

As noted above, JP 10-284035 is directed to an explosion-proof mechanism for a sealed battery. In Figure 1, it teaches an upper safety valve (17) welded to a lower disk (18) having a circular thin portion (29).

Therefore, the invention as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made because the artisan would be motivated by the disclosure of JP '035 to use a thin portion in the disk of Taki et al. In paragraph [0010], JP '035 teaches that "reliable current interception function" can be obtained using this configuration. Accordingly, the artisan would be motivated to use a rupturable thin portion in the disk of Taki et al.

Furthermore, the artisan would be motivated to use electrode materials that dope and undope lithium so as to result in a lithium-ion battery, because these materials are known to have higher cycle life and increased safety compared with electrode materials that do not intercalate lithium (e.g., lithium metal). It is noted that the Taki reference teaches a "carbon lithium battery" in column 1, line 11, which is indicative of a carbonaceous lithium intercalation negative electrode. Accordingly, the recitation of intercalation electrodes in claims 16 and 18 is also not considered to distinguish over the references.

***Response to Arguments***

3. Applicant's arguments filed December 29, 2003 have been fully considered but they are not persuasive. Regarding the Taki reference, Applicants assert that this reference is disqualified from being used in a §103 because it was owned by or subject to an obligation to assignment to Sony Corporation. However, as the Taki reference qualifies as prior art under 35 USC §102(b), the issue of common ownership is not germane to its application in a §103 rejection.

Applicants further assert that "[n]one of the references discloses or suggests a safety valve having two different dimension circles which a plurality of linear thin portions are formed." However, such limitation is not recited in independent claim 14. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Similarly, Applicants assert that "Figure (b) of JP'035 consists a letter 'C' configuration which does not allow the centering portion of the safety valve [i.e., disk] to be cleaved." This manner of completely cleaving the center portion is also not recited in independent claim 14, which merely recites that the disk "has a linear thin portion." Accordingly, the rejection under 35 USC §103 rejection of claims 14-18 is still believed to be proper and is maintained herein.

***Allowable Subject Matter***

4. Claims 1, 2, and 4-13 are allowed.
5. The following is a statement of reasons for the indication of allowable subject matter:

The reasons for allowance of independent claim 1 were given in the Office Action of March 18, 2003 and remain applicable herein.

*Conclusion*


6. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Crepeau whose telephone number is (571) 272-1299. The examiner can normally be reached Monday-Friday from 9:30 AM - 6:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski, can be reached at (571) 272-1302. The phone number for the organization where this application or proceeding is assigned is (571) 272-1700. Documents may be faxed to the central fax server at (703) 872-9306.

Jonathan Crepeau  
Patent Examiner  
Art Unit 1746  
January 14, 2004

  
BRUCE F. BELL  
PRIMARY EXAMINER  
GROUP 1746